REMARKS

This is a timely reply to the Official Action of October 22, 2002. The Examiner rejects all pending claims of the application. The grounds for rejection are traversed below.

Claims Rejections under 35 U.S.C. § 103

Claim 1

In the Office Action, the Examiner rejects the claims of the application under 35 U.S.C. 103 as being unpatentable over Blackledge et al. (U.S. Pat. No. 5,835,738) in view of Garbus et al. (5,884,027 and/or Kugue (U.S. Pat. No. 5,911,042). Specifically the Examiner asserts that Blackledge teaches all of the elements claimed in claim 1, except the bi-directional address remapping function which is claimed in claim 1 as "the address remapper remapping a dummy address from one section into a physical address to the other section." The Examiner further asserts that one of ordinary skill in the art would have found that the address translation of Blackledge must work bi-directionally because the communication of one device to another device across the bridges, which includes an address, control information and the data must work in either direction. Further, the Examiner asserts that Garbus and Kugue disclose such a bi-directional address translation. The Examiner then concludes that it would have been obvious to modify Blackledge with the teachings of Garbus and/or Kugue in order to identify one device from another device across the bridge.

As thoroughly discussed in Applicant's Response to Final Rejection dated April 11, 2002, Figure 2 of Blackledge is undeniably a one way address remapper given the fact that the address comparator and range filter 52 only samples one bus, namely PCI bus 56. In a similar vein, in Figure 2, the translator 54, only translates addresses from bus 56 to new addresses on bus 58. For brevity, the additional points made in the April 11, 2002 Response, will not be repeated, however, the Applicant continues to assert those arguments.

In addition, the Applicant's supplied extensive arguments in the reply dated July 25, 2002, that one skilled in the art would not have found that address translation of Blackledge must work bi-directionally. For brevity, the arguments made the July 25, 2002 Response will not be repeated; however, the Applicant continues to assert those arguments.

In the Final Action dated October 22, 2002, the Examiner states on page 3 that "Applicant's arguments filed on 4/25/02 have been fully considered but they are not persuasive." The Applicant assumes that the Examiner mistyped and meant to indicate that the Applicant's

arguments filed on 7/25/02 have been fully considered. However, in the final action, the Examiner did not address all of the arguments provided by the Applicant in the 7/25/02 response.

The Examiner states that "the gist of the argument is there is no teaching, suggestion or motivation to combine the two references." However, Applicant respectfully disagrees. In the 7/25/02 response, the Applicant presented both arguments as to why Blackledge, Garbus and Kugue did not teach all of the elements as claimed in the present application. In addition, the Applicant also provided arguments that indicated that even if the Examiner continued her assertion that all elements were taught by the combination of Blackledge, Garbus and Kugue, that there was no motivation to combine the references.

Applicant respectfully requests that the Examiner respond to the arguments presented to provide the Applicant with a clearer picture of her interpretation of the prior art references.

During a telephone conversation between the Examiner and the undersigned she indicated that she agreed that Blackledge did not teach an "each station on each section of the bus are assigned a dummy address for being addressed by a station on the other section, the address remapper remapping a dummy address from one section into a physical address to the other section." Further, Applicant's have previously submitted arguments that one skilled in the art would not find it obvious to change the address translator of Blackledge to be the address remapper of the present invention.

Rejections based upon Kugue

The Applicant also provided arguments in the response of 7/25/02 why Kugue did not teach, disclose or suggest "each station on each section of the bus are assigned a dummy address for being addressed by a station on the other section, the address remapper remapping a dummy address from one section into a physical address to the other section", as is claimed in claim 1. The argument is repeated below for the Examiner's consideration. The Applicant's respectfully request that the Examiner comment on the merits of the following argument.

Kugue teaches a computer system enabling access lock of a storage device to be released when a portable computer and an expansion unit are hotly docked and thus permitting the storage device to be added as a resource, see col. 2, lines 20-24 of Kugue. The Examiner points to col. 6, lines 10-14 of Kugue as teaching bi-directional address translation. Col. 6, lines 10-14 state "The host-PCI bridge unit 12 has a function for, in a bi-direction manner, converting bus cycles including data and addresses between the processor bus 1 and the internal PCI bus 2". The

Applicant is unaware of where else in Kugue that the concept of converting bus cycles including data and addresses is mentioned. Thus, it is unclear from the wording of Kugue what converting means. In fact, in col. 6, lines 22 - 26 of Kugue state that the data transfer cycle on the internal PCI bus 2 is composed of address phases and one or more data phases following the address phase. In the address phase, the address and the type of transference are output, while 8-bit, 16,-bit, 24-bit or 32-bit data is output in the data phase. Thus, one skilled in the art would assume that the converting of the address includes sending out the address with the type of transference and the converting of the data is sending out the data in different size blocks. Sending out the address with the type of transference is not address remapping. Kugue, therefore, does not teach, disclose or suggest, "each station on each section of the bus are assigned a dummy address for being addressed by a station on the other section, address remapper remapping a dummy address from one station into a physical address to the other station" as is claimed in claim 1.

Rejections based upon Garbus

The Applicant also provided arguments in the response of 7/25/02 why Garbus did not teach, disclose or suggest "each station on each section of the bus are assigned a dummy address for being addressed by a station on the other section, the address remapper remapping a dummy address from one section into a physical address to the other section", as is claimed in claim 1. The argument is repeated below for the Examiner's consideration. The Applicant's respectfully request that the Examiner comment on the merits of the following argument.

Garbus teaches architecture for an I/O processor that integrates with a PCI to PCI Bridge. In the Office Action, the Examiner points to Garbus, col. 22, lines 37-58 for support that Garbus teaches a bi-directional address translator. Garbus discloses address translation units that support both inbound and outbound address translation. However, Garbus further teaches that the address translation units implement an address windowing scheme to determine which addresses to claim and translate to the appropriate bus, see col. 23, lines 12-15. Thus, the address translator of Garbus first determines if the address is directed toward a device connected to it's bus and then, if the address is indeed a match, the bridge will translate the address. In contrast, the bridge of the present invention does not filter the address, instead claim 1 claims, "an address remapper remapping a dummy address from one section into a physical address to the other section". Thus, neither Blackledge nor Garbus teach, disclose or suggest "an address remapper remapping a dummy address from one section into a physical address to the other section", as claimed in claim 1. Thus, it is submitted that claim 1 is deemed patentable over the cited prior art.

Independent Claims 4, 10, 13 and 16

The same arguments applied to claim 1 can also be applied to independent claims 4, 10, 13 and 16. Thus, claims 4, 10, 13 and 16 are deemed to be patentable over the Blackledge, Kugue, Garbus, and/or Kugue either alone or in combination.

Independent Claim 18

Claim 18 claims, in part, "the address remapper transparently remapping each dummy address from one section into a physical address on the other section" (emphasis added).

Again, the Applicant provided arguments in July 25, 2002 Response that of why claim 18 was patentable over the cited prior art. The Examiner states in the Final Office Action that Blackledge discloses an address translation is transparent (e.g. without user intervention). However, the Examiner's comment does not address how she is interpreting Blackledge, such that Blackledge teaches, discloses or suggests an "address remapper transparently remapping each dummy address from one section into a physical address on the other section", as is claimed in claim 18. Applicant's respectfully point the Examiner to col. 5, lines 47-52 of Blackledge. As discussed in our 7/25/02 response, the address translation in Blackledge filters out addresses not corresponding to the subordinate devices. The translator then performs the required translation. Thus, the address translation device of Blackledge is an address translator selectively translating address from one bus to an address on another bus, and not an "address remapper transparently remapping each dummy address from one section into a physical address on the other section" as is claimed in claim 18. Thus, it is submitted that claim 18 is patentable over Blackledge. Again, the Examiner is requested to discuss how she is interpreting the prior art of Blackledge to teach an "address remapper transparently remapping each dummy address from one section into a physical address on the other section," as is claimed in claim 18.

Further, the Applicant's provided arguments in the 7/25/02 response as to why neither Kugue nor Garbus teach, disclose or suggest an "address remapper transparently remapping each dummy address from one section into a physical address on the other section." These arguments will not be repeated here for the sake of brevity but the arguments are still maintained by the Applicant. If the Examiner finds that these arguments are not persuasive the Applicant respectfully request that the Examiner indicate why she disagrees with the arguments presented.

Motivation to Combine

In the Final Office Action, the Examiner asserts that the test for combining references is what the combined teachings of the references would have suggested to those of ordinary skill in the art. The Examiner cites to *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981) to support her position. However, the Applicant respectfully disagrees with the Examiner and does not believe that the circumstances in *In re Keller* apply to the present case.

The Applicant has included a copy of *In re Keller* for the Examiner's review. It is from page 881 of *In re Keller* that the Examiner finds the language of *In re Keller* upon which she relies. In the last paragraph on page 881, it states that "Both Keller and Berkovits disclose heart stimulators that use R-C type timing circuits. Walsh teaches the use of digital type timing circuits in place of R-C type timing circuits in conventional heart stimulators. Therefore, the question is whether it would have been obvious to one of ordinary skill in the art, working with the Keller and the Berkovits and the Walsh references before him, to do what the inventors herein have done, that is, to sue a digital timing circuit in a cardiac pacer." Thus, in *In re Keller*, the teachings of Walsh suggested that digital timing circuits could replace R-C type timing circuits. However, this type of teaching is absent in the prior art cited by the Examiner.

For example, Blackledge teaches a bridge 50 couples a PCI bus 56 to a Micro Channel (or other standard I/O bus architecture) bus 58, and includes an address comparator/range filter 52 and a translator 54," see col. 5, lines 40-45. The Examiner has indicated (in the Official Action of 4/25 02) that the teachings found in Garbus, col. 22, lines 37-58 disclose a bi-directional address translation. Garbus in col. 22, lines 38-40 states "The following is a description of the mechanism which interfaces between the primary and secondary PCI buses and the local bus." Further in col. 22, lines 44-47 Garbus states "This interface consists of two address translation units (ATU) 43a/43b and a messaging unit 45. The ATUs support both inbound and outbound address translation." Neither Blackledge nor Garbus teaches, or provides any motivation for, the replacement of the address translation device of Blackledge by the address translation units of Garbus. The Applicants do not understand where in either Blackledge or Garbus, the Examiner is finding the motivation to combine these references.

Further, the Examiner has indicated (in the Official Action of 4/25/02) that the teachings found in Kugue col. 6, lines 10-14 disclose bi-directional address translation. These lines state "The host-PCI bridge unit 12 has a function for, in a bi-direction manner, converting bus cycles including data and addresses between the processor bus 1 and the internal PCI bus 2; and a function for controlling an access to the memory 13. Again, neither Blackledge nor Kugue

teaches, or provides any motivation for, the replacement of the address translation device of Blackledge by the address translation device of Kugue. Applicant respectfully requests that the Examiner point out where in either Blackledge or Kugue, she has found the teachings or motivation to combine these references. Applicant asserts that there must be some teaching in one of the prior art references of why one skilled in the art would put the two references together. The idea of putting the two references together can not come from the applicant's own disclosure. Thus, if the Examiner had not read the applicant's disclosure, how would she have known to put these two references together. The combination of the references can not be based upon hindsight.

Applicant respectfully incorporates by reference all of the arguments previously made in the response of 7/25/02 regarding the lack of motivation to combine and respectfully requests that the Examiner reconsider those arguments. Further, if the Examiner still holds the position that the references do teach all of the elements claimed in the independent claims and that the references do provide the motivation to combine, the Examiner is requested to explain to the Applicant how she arrived at those conclusions.

Dependent Claims 2-3, 5-8, 11-12, 14-15, 17, and 19

Regarding Claims 2-3, 5-8, 11-12, 14-15, 17 and 19 , the Examiner rejects these claims under 35 U.S.C. 103(a) as being made obvious by Blackledge in light of other references. However, these claims depend upon either Claims 1, 4, 10, 13, 16 or Claim 18. Therefore, the Applicant submits that these claims are patentable over Blackledge at least based upon their dependence on either Claims 1, 4, 10, 13, 16 or Claim 18.

Comments for Dependent Claims 2, 14 and 17

Regarding claim 2, in the Final Office Action, the Examiner asserts that Blackledge teaches that a physical address comprises a fixed part and a settable part (the fixed part is the part that does not change and the settable part is the part that does change). Claim 2 recites in part "the format of the physical address comprises a fixed part and a settable part, and wherein the dummy address is obtained by changing at least one bit of the fixed part of the physical address." However, the Examiner has indicated that the settable part of the fixed address is the part that changes. If this is the case, then how can Blackledge teach the dummy address is obtained by changing at least one bit of the fixed part of the physical address? The Examiner is requested to clarify how she interprets Blackledge to teach all of the elements of claim 2.

In addition, the same arguments presented above in support of the patentability of claim 2 can be applied to claims 14 and 19. Thus, Applicant submits that claims 14 and 19 are also patentable over Blackledge, Kugue and their combination.

Conclusion

The Applicant asserts that Claims 1-8, 10-19 are patentable for the reasons set forth above. Therefore, the application, then, is properly allowable over the prior art which has been cited. It is respectfully requested that a Notice of Allowance be issued.

If the Examiner is not convinced that the present application is in order for allowance, Applicant respectfully requests that the finality of the previous Official Action be withdrawn, and the Examiner issue a new Official Action fully explaining why the prior art cited teaches each and every element of the claims and where in the prior art the motivation to combine can be found. If Applicant is forced to file a Notice of Appeal and an Appeal Brief, he should not have to speculate as to how the Examiner is interpreting the cited references. The Examiner is respectfully requested to point out with specificity where each and every limitation of each and every claim are allegedly taught or suggested by the prior art as required by 37 CFR 1.104(c)(2). If the Examiner is relying on any facts within her own knowledge on rejecting the claims, she is respectfully requested to provide an affidavit as required by 37 CFR 104(d)(2).

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account 12-0145.

I hereby certify that this correspondence is being transmitted via facsimile to: Commissioner of Patents and Trademarks, Washington D.C. 20231 at 703-746-7238

12-20-02
(Date of Deposit)

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Respectfully submitted,

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